

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Original) A method of binder extraction and sintering of a green body in a state of weightlessness, comprising:
 - a. providing a green body composed of at least one sinterable particulate material and an organic binder soluble in supercritical fluids
 - b. placing said green body on a weighing device capable of operating in the environment of a hot isostatic press system and displaying the weight of said green body externally to said hot isostatic press system
 - c. loading said weighing device and said green body into the chamber of said hot isostatic press and filling said chamber with a fluid medium which, above its critical point, is a solvent for the organic binder of said green body
 - d. pressurizing said fluid medium until said external green body weight indication is substantially nil
 - e. raising the temperature in the chamber of said hot isostatic press system until binder extraction and sintering of the green body are substantially completed whilst maintaining said fluid medium at a pressure such that said green body weight indication remains substantially nil.
2. (Original) The method of claim 1 wherein said fluid medium is constituted by a plurality of supercritical fluids
3. (Original) The method of claim 1 wherein said fluid medium is carbon dioxide
4. (Original) The method of claim 1 wherein said fluid medium is xenon
5. (Original) The method of claim 1 wherein said fluid medium is constituted by a mixture of carbon dioxide and xenon

6. (Original) The method of claim 1 wherein the composition of said fluid medium is changed during binder removal and sintering of said green body
7. (Original) The method of claim 1 wherein said green body has a convoluted geometry
8. (Currently Amended) A method of binder extraction and sintering of a green body in a state of weightlessness, comprising:
 - a. providing a green body composed of at least one sinterable particulate material and an organic binder soluble in supercritical fluids
 - b. loading said green body in the chamber of a hot isostatic press system and filling said chamber with a fluid medium which, above its critical point, is a solvent for the organic binder of said green body
 - c. raising the temperature in the chamber of said hot isostatic press system until binder extraction and sintering of the green body are substantially completed whilst ~~simultaneously continuously adjusting the pressure of~~ **maintaining** said fluid medium ~~throughout the binder extraction and sintering process~~ **at such pressure, as determined by a suitable mathematical model, to result in the its** density ~~of said fluid medium remains~~ **remaining** substantially equal to that of said green body ~~being processed.~~
9. (Original) The method of claim 8 wherein said fluid medium is constituted by a plurality of supercritical fluids
10. (Original) The method of claim 8 wherein said fluid medium is carbon dioxide
11. (Original) The method of claim 8 wherein said fluid medium is xenon
12. (Original) The method of claim 8 wherein said fluid medium is constituted by a mixture of carbon dioxide and xenon
13. (Original) The method of claim 8 wherein the composition of said fluid medium is changed during binder removal and sintering of said green body
14. (Original) The method of claim 8 wherein said green body has a convoluted geometry